



WATER CRAFT STABILIZING DEVICE

This application claims the benefit of U.S. Provisional Patent Application No. 60/442,979, filed January 28, 2003.

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BACKGROUND OF THE INVENTION

The present invention relates in general to a stabilizing device for water craft, and more particularly to water craft of the type used for water sports such as fishing. Even more particularly this invention relates to a stabilizing device that is attachable to a water craft in such a manner as to prevent drifting or moving off course as a result of natural or
10 unnatural forces, particularly the effects of currents and wind upon a water craft that is either stationary or moving on a desired heading.

When stationary in or on the surface of a body of water, most water-borne vehicles provide large surface areas along the longitudinal axis that makes the vehicle susceptible to the effects of forces such as currents and wind, among other things. Such
15 forces can cause the vehicle to drift either away from the desired stationary position or off of the desired course heading. This creates a need for constant vigilance and numerous adjustments to maintain the desired position and/or heading.

A common solution for boaters wishing to remain in a stationary position is to allow the engine to idle and make small adjustments as necessary. Some boaters will also
20 make use of a small trolling motor to achieve the same effect. Either solution is not an effective answer to the problem for several reasons. First, it requires the vigilance and attention of the boater, often at a time when they are focusing on the task at hand, such as

fishing. It distracts them, and may require sacrificing a fish catch merely to adjust the boat's position. Secondly, it wastes either gas in an outboard engine or battery power in a trolling motor. Third, it creates noise and water turbulence that could negatively impact fishing results. Finally, it is not an efficient or effective way to counter forces that are directed at an angle to the longitudinal axis of the boat.

The same types of adjustments are often necessary to maintain a desired course heading in an underway boat. The need for such constant minor course corrections wastes time and fuel. The present invention is a simple and cost-effective solution to the above problems.

SUMMARY OF THE PRESENT INVENTION

The present invention provides a boat stabilizing device comprising a generally blade-shaped stabilizer attached to a boat that projects into the water in such a manner as to counter movement of the boat at an angle to the longitudinal axis, such movements the result of such things as wind, current, and other forces acting upon the boat from in or on the boat itself. This stabilizer provides resistance at an angle to the force countering the resultant unwanted motion of the boat. When the boat is stationary, the present invention operates to keep the boat stationary. When the boat is in motion, the device operates to keep the boat from drifting or moving off or away from the desired heading.

The present invention can be either built into the boat as a permanent part thereof, or as a system that is installed after the boat has been constructed. There are advantages to both, but the post-construction installation reduces cost and is easy to install, position

for optimal stabilization, and remove. Further, an embodiment of the present invention allows for its removal to use as a spare paddle in the event of an emergency.

5 The device itself comprises generally a top edge, a bottom edge, proximal and distal ends, and two stabilizing surfaces. The device is attached to the boat or water craft at the proximal end.. The two stabilizing surfaces are oriented generally perpendicular to the longitudinal axis of the boat or water craft. Experimental use has shown that a bottom edge angled downward from the proximal end to the distal end provides a more effective lower edge for riding over obstructions and entanglements. Experimental use has also shown that a design which grows narrower along the longitudinal axis running from the end proximal to the boat towards the end distal to the boat operates more efficiently. 10 Such narrowing does not reduce the surface area of the vertical sides of the device, but reduces the thickness of the device horizontally. All embodiments of the present invention comprise a device that projects from the structure of the boat at an angle downward and/or outward such that part or all of the stabilizing surfaces of the device are in contact with the water. 15

Further features and details of the invention will become clear to those skilled in the art to which this invention pertains upon reference to the following drawing and description.

20 BRIEF DESCRIPTION OF THE DRAWING

FIG. 1 is a diagrammatic stern view of a small boat embodying the present invention.

DESCRIPTION OF A PREFERRED EMBODIMENT

Referring now to the embodiment of the invention illustrated in the drawing FIG.

1 shows the stern of a boat 4 with the stabilizing device 1 attached. The stabilizing device 1 is comprised of two stabilizing surfaces 6 and 12, two edges 7 and 8, a distal end 9 and a proximal end 13. The edge 8 angles downward from the proximal end 13 to the distal end 9. The proximal end 13 of the stabilizing device 1 may be attached hingedly to the boat 4 at an attachment plate 3 with a swivel connection 2. The swivel point 2 preferably allows the stabilizing device 1 to move or be moved in a vertical direction with respect to submerged obstacles and obstructions.

The stabilizing device 1 may further be attached to the boat 4 by a line 11 at an attachment point 5 on the stabilizing device 1 and at an attachment point 10 on the boat 4 such that the stabilizing device 1 can move or be moved in a vertical direction, but the range of downward motion is limited to a maximum desired downward angle by the line 11.

In another embodiment, the edges 7 and 8 are thicker at the proximal end 13 and narrow in the direction of the distal end 12. As the edges 7 and 8 become narrower, the stabilizing surfaces 6 and 12 become closer together in a wedge shape, but the surface area of the stabilizing surfaces remains the same as in the embodiments where there is no narrowing of the device in the distal direction.

This invention has been described in connection with a preferred embodiment thereof, it should be clear to one skilled in the art that modifications and changes therein may be made by one skilled in the art without departing from the spirit and scope of the

invention. The details of the present invention as described are illustrative only, and do not limit the scope of the present invention as claimed below.

What is claimed as invention is:

- 5 1. A generally blade-shaped device for use in stabilizing boats, water craft, and other vehicles, said device comprising:

 at least one generally blade-shaped extension having a top edge, a bottom edge, a proximal end and a distal end, and two stabilizing surfaces
- 10 2. The device of claim 1, wherein said device further comprises a connecting means to attach said proximal end of said stabilizing device to said vehicle.
3. The device of claim 2, wherein said connecting means further comprises a

15 disconnecting means so that the device may be removed and reattached to said vehicle.
4. The device of claim 1, wherein said stabilizing surfaces are oriented generally perpendicular to the longitudinal axis of said vehicle.
- 20 5. The device of claim 1 wherein said bottom edge is angled downward relative to said top edge in the direction from said proximal end to said distal end.

6. The device of claim 1 wherein said top edge and said bottom edge narrow in the direction from said proximal end towards said distal end.
- 5 7. The device of claim 2, wherein said blade-shaped device is attached to the structure of said boat, water craft, or vehicle at an angle outward and downward from said vehicle such that part or all of the stabilizing surfaces of the device are immersed in the water.
- 10 8. The device of claim 2 wherein said connecting means further comprises a hinging means wherein said hinging means allows said stabilizing device to move or be moved about said hinging means in a direction perpendicular to the horizontal axis of said vehicle.
- 15 9. The device of in claim 6 wherein said stabilizing device is further attached to said boat or other water craft by a restraining means at an attachment point on said stabilizing device and at an attachment point on said vehicle such that the downward range of motion of said stabilizing device is limited to a maximum desired downward angle.
- 20 10. The device of claim 7 wherein said restraining means is a rope, line, cord, spring, or other flexible and/or stretchable device.

11. A generally blade-shaped device for use in stabilizing vehicles such as boats and other water craft, said device comprising at least one generally blade-shaped extension having a top edge, a bottom edge, a proximal end and a distal end, and two stabilizing surfaces; a connecting means to attach said proximal end to said vehicle; a restraining means at an attachment point on said stabilizing device and at an attachment point on said vehicle such that the downward range of motion of said stabilizing device is limited to a maximum desired downward angle.

12. The device of claim 11 wherein said top edge and said bottom edge narrow in the direction from said proximal end towards said distal end.